

COURSE GUIDE

Programme	:	2-Year Post Dip.-B.ED VOTECH (TECHNICAL)
Course No. / Title	:	BTE 321 Building Drawing
Credit rating	:	2 credits
Academic Year	:	2007 / 2008, Semester 2; Level 300
Prerequisites	:	Successful completion of Graphic Communication and Design
Time Table Slots	:	Wednesday, 7.a.m - 10.a.m
Location	:	New Building 2
Prohibited Combinations	:	None
Lecturers	:	S. V. Buor-Frimpong and Wadzraku
Availability of Lecturers	:	By appointment

Overall Aims

This course is intended to create and develop an interest and to advance the knowledge in Building Drawing. By presenting the application of geometrical principles and construction methods related to the design and construction of structures.

Course Description

Preparation of simple working drawings and details from sketches based on small dwellings, garages, sheds, constructional details of parts of buildings e.g. foundations, walls and openings, jambs, sills, lintels roofs doors and windows. Staircases in both timber and concrete. Reinforced concrete and timber floors, roofs of large span in both metal and timber trusses. Drawing of plans, elevations and section of dwelling houses including two-storey building, drawing to given scales and specification. Designing of special facilities: schools, workshops health post etc. measured drawings, pictorial and orthographic sketches of building details, perspective projections.

The graphical treatment of building/ engineering problems e.g. link polygons, force diagrams for framed structures. Shearing force and bending moment diagrams for uniformly and non-uniformly distributed and concentrated loads on cantilevers and simply supported beams. Determination of first and second moments of areas.

Learning outcomes (Assessment objectives)

At the end of the semester you will be able to:

1. read graphical information
2. demonstrate a practical knowledge of standards and be able to apply these to the production of drawings.
3. produce construction drawing from verbal and graphic instructions.
4. design a building / structure from a given brief
5. display good draughtsmanship
6. identify the implications of design and technology upon society and the environment

7. identify a suitable design opportunity with reference to time, cost, available resources, cultural and environmental contexts of designing buildings/ structures.
8. demonstrate an ability to apply high level personal skills in thinking planning, constructing, modeling and communicating.

Weekly Programme

WEEK NO.	TOPIC OUTLINE	ASSIGNMENT	REMARKS
1.	Registration / Counseling		
2.	Drawing Office Practice <ul style="list-style-type: none"> • drawing equipment • line work • drawing standards • draughting conventions • preferred scales commonly used for different types of drawings • drawing sheet sizes • general lay-out of drawings 	Carry out further research compile notes and sketches	Notes to be assessed though observation.
3.	Preparation of Working drawing <ul style="list-style-type: none"> • Orthographic Projection <ul style="list-style-type: none"> • Plans • Sections • elevations • Measured drawings • Field trip 	CLASSWORK	Submit classwork for assessment. Submit measured drawings for assessment.
4.			
5.			
6.	Details Drawings <ul style="list-style-type: none"> • windows and doors • floors • staircases roofs Designing Special Facilities <ul style="list-style-type: none"> • schools • workshops • health post, etc. 	CLASSWORK	Submit for assessment.
7.		HOMEWORK	Submit for assessment.
8.		Individual Project work	Submit project drawings for assessment
9.	Graphical treatment of building / engineering problems. <ul style="list-style-type: none"> • Shear force diagram • Bending moment diagram • Frame structure • Determination of first and 	CLASSWORK	Submit for assessment
10.		HOMEWORK	
11.			

	second moments of area.		
12.	Freehand sketeches <ul style="list-style-type: none"> • Sketches of plans • Sketches of elevation • Sketch perspective 	CLASSWORK HOMEWORK	Submit for assessment
13.	B U F F E R		
14. 15. 16.	REVISION / END OF SEMESTER EXAMINATION		

TEACHING AND LEARNING METHODS

1. Lecture presentation/ demonstration and studio based applications.
2. Individual tutorials supporting project work, personal record and folio of work.
3. Case study development and presentation of outcomes.
4. Group presentation / discussion
5. Industrial visit.

ASSESSMENT METHODS AND WEIGHTING

Assessment will be in terms of the overall success of:

- | | |
|---|-------|
| - Class work/ class test and individual project work. | - 40% |
| - End of Semester Examination. | - 60% |

Attendance

Attendance at all time-tabled teaching sessions is essential.

Submission of Assignments

Students should submit their assignments through the class secretary.

Work not Submitted

If you do not submit your work for assessment the grade that will be awarded for your performance in the course will be E/D.

Academic Misconduct

You are reminded that suspicion of cheating, plagiarism or collusion in respect of any aspect of your work can result in failure of the course. University Academic Regulation gives full details.

REFERENCES

1. Description Geometry for Architects and Builders by Lee
2. Practical Geometry for Builders by Fraser R.
3. Design for Residential construction by Freda Crunden
4. Building Construction - Enclosure Systems by James Ambrose.
5. Recommendations for Building Drawing Practice BS1192: 1969. British Standard Institution.

6. Development Plan Maps. Ministry of Housing and Local Government.
7. Techniques of Landscape Architecture, edited by A. E Weddle Heinemann.
8. Understanding Buildings - A Multidisciplinary Approach by E. Reid.
9. Building Drawing - Understanding the Graphic Language by Buor-Frimpong S. V.
10. Elements of Architectural Design by Burden E.
11. Design strategies in Architecture by Baker G.

Please note that students are expected to have their personal set of drawing equipment and any additional pens, pencils, lay-up pads or stencils.